



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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Lieutenant Governor

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Secretary

Martin Suuberg  
Commissioner

May 14, 2015

Christopher October  
Area Environmental Manager  
Republic Services, Inc.  
1080 Airport Road  
Fall River, MA 02720

**RE: PLAINVILLE**  
Transmittal No.: X263842  
Application No.: SE-14-034  
Fee Class: SM79-R  
FMF No.: 31960  
310 CMR 7.02(9)  
**PROPOSED  
RESTRICTED EMISSION  
STATUS APPROVAL**

Dear Mr. October:

The Massachusetts Department of Environmental Protection ("MassDEP") has determined that the above referenced Restricted Emission Status ("RES") Application is administratively and technically complete. MassDEP hereby **proposes to approve** your RES Application legally limiting the amount of federal potential emissions from your facility through a restriction on the fuels used and other restrictions as noted herein.

This **Proposed RES Approval** will be issued in accordance with Regulation 310 CMR 7.02(9) of the Air Pollution Control Regulations ("Regulations"), Regulation 310 CMR 7.00 as adopted pursuant to M.G.L. c.111, Sections 142A-142N.

Included as part of this Proposed RES Approval are the following:

- Special Conditions for RES
- General Conditions for RES

Please review the entire Proposed RES Approval carefully as it stipulates the particular conditions the facility owner/operator must comply with for the facility to be operated in compliance with the Regulations.

MassDEP has determined that the filing of an Environmental Notification Form ("ENF") with the Secretary of Energy and Environmental Affairs, for air quality purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts

Environmental Policy Act and Regulation 310 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions” which allow the Secretary to require the filing of an ENF and/or Environmental Impact Report (“EIR”) at a later time.

Should you have any questions concerning this Proposed RES Approval, please contact Peter Russell at (508) 946-2821.

Sincerely,

This final document copy is being provided to you electronically by the  
Department of Environmental Protection. A signed copy of this document  
is on file at the DEP office listed on the letterhead.

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Thomas Cushing  
Permit Chief  
Bureau of Air and Waste

ecc: Plainville Fire Department  
Plainville Board of Health  
Southeastern Regional Planning District – Stephen Smith  
MassDEP/Boston – Yi Tian  
MassDEP/SERO – Maria Pinaud, Mark Dakers, Laura Black, Peter Russell  
EPA – Region 1, Clean Air Program – Donald Dahl  
Republic Services, Inc. – Glen Hartmann  
Sanborn, Head & Associates, Inc. – Heather Little, David Adams

**I. SPECIAL CONDITIONS FOR RESTRICTED EMISSION STATUS APPROVAL**

**A. EQUIPMENT DESCRIPTION**

Republic Services, Inc. (“the Permittee”) has submitted information via a AQ 09 RES Application Form which indicates that it plans to remove certain existing combustion equipment subject to MassDEP Air Quality Approval No. 4I99013 and Air Quality Operating Permit No. 4V08057, and has requested to reduce fuel consumption at the Plainville Landfill (“the Facility”). Table 1 below shows emission sources, pollution control devices and exempt equipment associated with the Plainville Landfill and the operational status of said equipment:

Table 1		
Description	Manufacturer & Model Number	Operational Status
Municipal Solid Waste Landfill	N/A	Closed Landfill 13,005,435 Mg Existing LFG Collection System
PCD-1 75.9 MMBtu/hr Enclosed Flare (LFG)	McGill EGF-2500	Equipment restricted by SE-14-034
PCD-2 60.0 MMBtu/hr Enclosed Flare (LFG)	Zink EGF-2000	Equipment restricted by SE-14-034
PCD-3 90.0 MMBtu/hr Enclosed Flare (LFG)	LFG Specialties EF95I12	Equipment restricted by SE-14-034
PCD-4 Landfill Gas Treatment system	N/A	Existing LFG Treatment System, owned and operated by Plainville Generating Company <sup>(Note 1)</sup>
0.117 MMBtu/hr Boiler (Distillate Oil)	Thermodynamics S100	310 CMR 7.02(2)(b)15. Unrestricted equipment

**Table 1 Notes:**

Note 1: The present landfill gas treatment system is owned and will continue to be operated by a separate entity, Plainville Generating Company, LLC, to condition LFG for proper combustion in LFG-fired engines.

**Key:**

CFR = Code of Federal Regulations

CMR = Code of Massachusetts Regulations

LFG = Landfill Gas

Mg = Megagram(s)

MMBtu/hr = 1,000,000 British thermal units per hour

N/A = Not Available or Not Applicable

PCD = Pollution Control Device

1. Table 2 below shows the existing Plainville Landfill federal potential emission limits as approved in application No. 4I99013 on June 30, 2003:

Pollutant	Current Emission Limit, Lb/MMBtu	Current Emission Limit, tons per consecutive 12-month period
Nitrogen oxides (NO <sub>x</sub> )	0.055	20.0
Carbon monoxides (CO)	0.273	99.4
Non-methane organic compounds (NMOC)	0.069	25.1
Particulate (PM)	0.046	16.7
Sulfur dioxide (SO <sub>2</sub> )	0.010	3.6
Volatile organic compounds (VOC)	0.055	20.0

2. Plainville Landfill has submitted information via a AQ 09 RES Application as a means to restrict potential emissions below operating permit program thresholds. Plainville Landfill proposes to operate the following equipment in Table 3 at the 14 Belcher Street, Plainville, MA facility:

Table 3				
EU#	Description of EU	EU Manufacturer and Model Number	Fuel	Maximum Energy Input Rating, MMBtu/hr
1	Enclosed Flare	McGill EGF-2500	LFG (primary) Propane (secondary) <sup>(Note 1)</sup>	75.9
2	Enclosed Flare	Zink EGF-2000	LFG (primary) Propane (secondary) <sup>(Note 1)</sup>	60.0
3	Enclosed Flare	LFG Specialties EF945I12	LFG (primary) Propane (secondary) <sup>(Note 1)</sup>	90.0
4	Office Boiler	Thermodynamics S100	Distillate Oil	0.117

**Footnotes:**

Note 1: Propane is used, as needed, for startup and to maintain a minimum heat input of 15 MMBtu/hr during periods of flare operation.

**Key:**

EU = Emission Unit

LFG = landfill gas

hr = hour

MMBtu = million British Thermal Units

**B. EMISSION LIMITS (SHORT TERM & LONG TERM)**

Nitrogen Oxides (NO<sub>x</sub>), Carbon Monoxide (CO), Non-methane organic compounds (NMOC), Particulate Matter (PM), Sulfur Dioxide (SO<sub>2</sub>), Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) emissions from the subject “facility” in Plainville, MA shall be restricted to the emission limits contained in Table 4 below. The “facility” as restricted in this document is limited to the equipment listed above in Table 1. Any future installations of equipment at the facility which are either exempt from Plan Approval pursuant to Regulation 310 CMR 7.02, or which will be installed in compliance with the Industry Performance Standards for Boilers, Regulation 310 CMR 7.26 (30) through 7.26 (37) and/or the Industry Performance Standards for Engines and Combustion Turbines, Regulation 310 CMR 7.26 (40) through (44) will be in addition to these emission limits.

Table 4		
Pollutant	Proposed Facility-Wide Emission Limit, tons per month	Proposed Facility-Wide Emission Limit, tons per consecutive 12-month period
Nitrogen oxides (NO <sub>x</sub> )	0.9 <sup>(Note 1)</sup>	10.3 <sup>(Note 1)</sup>
Carbon monoxides (CO)	4.2 <sup>(Note 1)</sup>	50.8 <sup>(Note 1)</sup>
Non-methane organic compounds (NMOC)	2.1 <sup>(Note 2)</sup>	25 <sup>(Note 2)</sup>
Particulate (PM)	0.7 <sup>(Note 1)</sup>	8.6 <sup>(Note 1)</sup>
Sulfur dioxide (SO <sub>2</sub> )	0.2 <sup>(Note 1)</sup>	2.4 <sup>(Note 1)</sup>
Volatile organic compounds (VOC)	1.2 <sup>(Note 2)</sup>	15 <sup>(Note 2)</sup>
HAP <sub>(single)</sub>	0.25 <sup>(Note 3)</sup>	3.0 <sup>(Note 3)</sup>
HAP <sub>(total)</sub>	0.58 <sup>(Note 3)</sup>	7.0 <sup>(Note 3)</sup>

**Footnotes:**

Note 1: Facility-wide potential emissions of NO<sub>x</sub>, CO, PM, and SO<sub>2</sub> are based on lb/MMBtu emission limits as approved in application No. 4I99013 on June 30, 2003 for EU1, EU2, EU3, plus AP-42 emission factors at 8,760 hours for the office boiler (EU4).

Note 2: Facility-wide potential emissions of NMOC and VOC include combustion from EU1, EU2, EU3, EU4 and fugitive emissions from the Landfill as calculated using AP-42 emission factors and 80% capture efficiency from the Landfill collection system.

Note 3: HAP emission limits include combustion from EU1, EU2, EU3, EU4 and fugitive emissions from the Landfill as calculated using AP-42 emission factors and 80% capture efficiency from the Landfill collection system.

**Key:**

CO = Carbon Monoxide

EU = Emission Unit

HAP = Hazardous Air Pollutant(s) as listed in the 1990 Clean Air Act (CAA) Amendments, Section 112(b).

lb/MMBtu = pound(s) per million British thermal units

NMOC = Non-methane organic compound(s)

PM = Particulate Matter

SO<sub>2</sub> = Sulfur Dioxide

VOC = Volatile Organic Compound(s)

C. PRODUCTION LIMITS

Not Applicable.

D. OPERATING LIMITS

1. The Permittee shall restrict the amount of fuel combusted at the subject facility in Plainville, MA as described in Table 5 below:

Table 5			
Fuel	EU	Monthly Restrictions	Consecutive 12-Month Period Restrictions
LFG and Propane (Note 1)	1,2,3	31,000 MMBtu combined	372,000 MMBtu combined

**Footnotes:**

Note 1: LFG heat value shall be determined by gas chromatograph and/or other methods approved by the Department. Propane usage shall assume a heat value of 1000 Btu per standard cubic foot.

**Key:**

EU = Emission Unit

LFG = Landfill Gas

MMBtu = Million British thermal units

E. MONITORING REQUIREMENTS

See GENERAL CONDITIONS I. and J. below.

1. The Permittee shall monitor facility operations to ensure compliance with emission limits and operational limits specified herein including but not limited to:
- a) maintaining efficient operation of the subject emission units;
  - b) a LFG flow recorder shall be maintained so that an on-site record of the volume of LFG fired in EU1, EU2 and/or EU3 will be available by date and time period;
  - c) a sample of LFG, as fired in EU1, EU2 and/or EU3, shall be analyzed to define heat value (i.e. British thermal units per standard cubic foot) at least once per month;
  - d) monitor usage of propane fuel for each month; and
  - e) additional monitoring as required by Plan Approval No. 4I99013.

F. RECORD KEEPING REQUIREMENTS

See GENERAL CONDITION K. below.

1. The Permittee shall maintain an on-site record of the volume of LFG (in standard cubic feet) fired in EU1, EU2 and/or EU3 for each month and for each consecutive twelve month period.

2. The Permittee shall maintain a record of the volume of Propane fuel (in standard cubic feet) fired in EU1, EU2 and/or EU3 for each month and for each consecutive twelve month period.
3. The Permittee shall maintain a record of the heat input (in British thermal units as determined by gas chromatograph and/or other methods approved by the Department) of the LFG fired in EU1, EU2 and/or EU3 for each month and for each consecutive twelve month period.
4. The Permittee shall maintain a record of the heat input (based on a heating value of 1000 British thermal units per standard cubic foot) of the propane fuel fired in EU1, EU2 and/or EU3 for each month and for each consecutive twelve month period.
5. The Permittee shall maintain a record of the facility-wide emissions in order to demonstrate compliance with the monthly and consecutive twelve month period emission limits found in Table 4 above. An interactive Microsoft Excel on-site record keeping form can be downloaded at <http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html>.

In addition, The Permittee shall maintain accurate and timely records documenting all combustion equipment retirements, replacements, and installations on-site and shall make said records available to MassDEP personnel upon request.

#### G. REPORTING REQUIREMENTS

See GENERAL CONDITION L. below.

The Permittee shall submit a Restricted Emission Status Exceedance Report (RESER) to MassDEP should it exceed any limitation/restriction established within this RES Approval. Said RESER report shall be submitted to this Office within seven (7) days of documentation of the exceedance of any limitation/restriction by the Permittee. The RESER shall include identification, duration, and reason for the exceedance, and remedial action plan to prevent future exceedances.

The Permittee shall be required to submit, on or before March 15<sup>th</sup> of each year, an Annual RES Compliance Report (ARESCR) to the Southeast Regional Office of MassDEP that documents the compliance status of the facility, for the previous Calendar Year, with respect to the limitations/restrictions established within this RES Approval. The Permittee shall utilize MassDEP's Annual Emissions Reporting Form, available in interactive Microsoft Excel format at: <http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html>.

H. OTHER CONDITIONS

1. The Permittee shall perform stack testing on the subject equipment when and if in the opinion of MassDEP such is deemed necessary.

II. GENERAL CONDITIONS FOR RESTRICTED EMISSION STATUS APPROVAL

- A. OPERATION - No person shall operate this facility except in conformance with the requirements established in this Restricted Emission Status Approval.
- B. SUSPENSION - This Approval may be suspended, modified, or revoked by MassDEP if, at any time, MassDEP determines that the facility is violating any condition or part of the Approval.
- C. OTHER REGULATIONS - This Approval does not negate the responsibility of the owner/operator to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this Approval imply compliance with any other applicable federal, state or local regulation now or in the future.
- D. EXISTING APPROVALS - All plan Approvals issued under Regulation 310 CMR 7.02 prior to the effective date of this RES Approval shall continue to meet the emission rates and approved conditions specified in the applicable plan Approval(s) unless specifically altered by this RES Approval.
- E. VISIBLE EMISSIONS - The facility shall be operated in a manner to prevent the occurrence of visible emissions which cause or contribute to a condition of air pollution as defined in Regulations 310 CMR 7.01 and 7.06.
- F. DUST AND ODOR - The facility shall be operated in a manner to prevent the occurrence of dust or odor conditions which cause or contribute to a condition of air pollution as defined in Regulations 310 CMR 7.01 and 7.09.
- G. NOISE - Noise from the facility during routine operation, including startups and shutdowns, shall not exceed MassDEP noise guidelines and shall not cause a condition of air pollution as defined in Regulations 310 CMR 7.01 and 7.10.
- H. ASBESTOS - Should asbestos remediation/removal be required as a result of this RES Approval, such asbestos remediation/removal shall be done in accordance with Regulation 310 CMR 7.15.
- I. MONITORING - Equipment or emission monitoring systems installed for the purpose of documenting compliance with this Approval shall be installed, calibrated, maintained and operated in sufficient manner to ensure continuous and accurate operation at all times.



J. TESTING - Any emission testing to be compared to limitations in this Approval must be conducted in accordance with the Environmental Protection Agency test methods as specified in the Code of Federal Regulations, Title 40, Part 60, Appendix A - Standards of Performance for New Stationary Sources or by another method correlated to the above method to the satisfaction of MassDEP and in accordance with the requirements noted in Regulation 310 CMR 7.13.

In accordance with Regulation 310 CMR 7.04(4)(a), each fuel utilization facility having an energy input capacity equal to or greater than 3,000,000 Btu per hour shall be inspected and maintained in accordance with the manufacturer's recommendations and tested for efficient operation at least once in each calendar year. The results of said inspection, maintenance and testing and the date upon which it was performed shall be recorded and posted conspicuously on or near the subject equipment.

K. RECORD KEEPING - A record keeping system shall be established and continued on site. All records shall be maintained up-to-date such that year-to-date information is readily available for MassDEP examination. Record keeping shall, at a minimum, include:

a) Compliance records sufficient to demonstrate that emissions have not exceeded what is allowed by this RES Approval. Such records may include daily production records, raw material usage rates, fuel purchase receipts, emissions test results, monitoring equipment data and reports.

b) Maintenance: A record of routine maintenance activities performed on emission unit control equipment and monitoring equipment including, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.

c) Malfunctions: A record of all malfunctions of emission unit control and monitoring equipment including, at a minimum: the date and time the malfunction occurred; a description of the malfunction and the corrective action taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed and the emission unit returned to compliance.

d) All records shall be kept on site for five (5) years and shall be made available to MassDEP upon request.

L. REPORTING - In accordance with Regulation 310 CMR 7.12, the facility shall file Source Registration on-line detailing information regarding the facility's emissions. The required information may include:

a) The nature and amounts of emissions from the facility.

b) Information which may be needed to determine the nature and amounts of emissions from the facility.

- c) Any other information pertaining to the facility which MassDEP requires.
  - d) In accordance with Regulation 310 CMR 7.12(2), information required by Regulation 310 CMR 7.12(1)(a) shall be submitted annually.
  - e) The Regional Bureau of Air and Waste, Compliance and Enforcement Office must be notified by telephone or fax as soon as possible after the occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and/or a condition of air pollution.
- M. MODIFICATIONS - Any proposed increase in emissions above the limits contained in this RES Approval must first be approved in writing by MassDEP pursuant to Regulation 310 CMR 7.02. In addition, any increase may subject the facility to additional regulatory requirements.
- N. REMOVAL OF AIR POLLUTION CONTROL EQUIPMENT - No person shall cause, suffer, allow, or permit the removal, alteration or shall otherwise render inoperative any air pollution control equipment or equipment used to monitor emissions which has been installed as a requirement of Regulation 310 CMR 7.00, other than for reasonable maintenance periods or unexpected and unavoidable failure of the equipment, provided that MassDEP has been notified of such failure, or in accordance with specific written Approval of MassDEP.